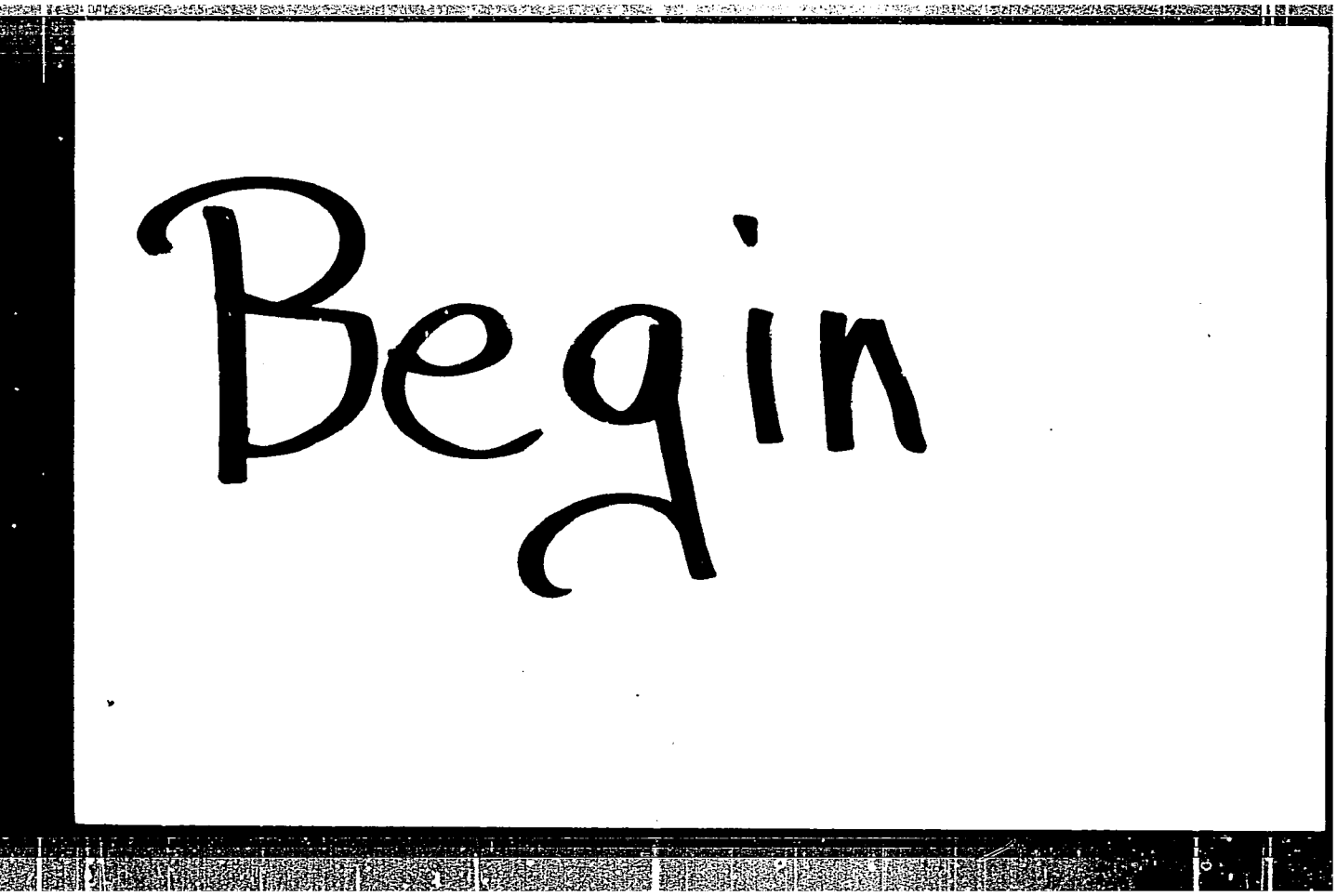

#609

TIKHOMIROV, B. M.

TO

TRIFONOVA, A.N.;TIKHOMIROV, B.M.

Physiologic considerations on various conditions of tissue in chicks of normal and decreased vitality. Doklady Akad nauk SSSR 85 no. 5: 1185-1188 11 Aug 1952. (CIML 23:3)

1. Presented by Academician A. I. Abrikosov 14 April 1952. 2. Institute of Experimental Medicine, Academy of Medical Sciences USSR.

COUNTRY	USSR
CATEGORY	Forestry. Forest Management.
ABS. JOUR.	Ref Zhur-Biologiya, No.1, 1959, No. 1473
AUTHOR	Tikhomirov, B.N.
INST.	Siberian Forest Engineering Institute
TITLE	Valuation Tables for Pine Timber Stands of the Angara River Basin.
ORIG. PUB.	Tr. Sibirsk. lesotekhn. in-ta, 1957, sb. 16, 113-133
ABSTRACT	No abstract

CARD: 1/1

TIKHOMIROV, B. N.

21909. TIKHOMIROV, B. N.

Vyrashchivaniye vysokokachestvennoy drevesiny terezy. Trudy sib. lesotekhn. in-ta, sb. 5, vyp. 4, 1949, s. 3-17. - Bibliogr: 17 nazv.

SO: Letopis' Zhurnal'nykh Statey, No. 29, Moskva, 1949.

TIKHOMIROV, B.N.

[Forests and the lumber industry of Siberia] Lesa i lesnaya promyshlennost' Sibiri. No.2. Moskva, Goslesbumizdat, 1953. (MIRA 11:4)
(Siberia--Forests and forestry)
(Siberia--Lumber trade)

Tikhomirov, B.N

USSR / Forestry. Forest Economy. K-4

Abs Jour: Ref Zhur - Biologiya, No. 1, 1958, 1338

Author : Tikhomirov, B.N.

Inst : Siberian Forest Engineering Institute

Title : Characteristics of the Pine Forests of the Angarskiy Basin

Orig Pub: Tr. Sibirsk. lesotekhn. in-ta, 1956, sb. 12, 101-106

Abstract: The basic lumber productivity classification of the pine forests of the Angara Basin is III. Some timber stands of IV Productivity are encountered in the northern part, and, in the southern, some of II Productivity. In the south there are also a very few stands of I quality. The productivity of pine forests is closely re-

Card 1/2

TIKHOMIROV, B.N.

CHIKILEVSKIY, Nikolay Nikolayevich, prof.; TIKHOMIROV, B.N., dotsent, kand. sel'skokhozyaystvennykh nauk, retsenzent; SHANIN, S.S., dots. kand. sel'skokhozyaystvennykh nauk, retsenzent; ZAKHAROV, V.K., prof.; retsenznet; VZYATYSHEV, F.V., inzh., retsenzent; ANUCHIN, N.P., prof., red.; KHLATIN, S.A., red.; ARNOL'DOVA, K.S., red.izd-va. BACHURINA, A.M., tekhn.red.

[Forest management] Lesoustroistvo. Moskva, Goslesbumizdat, 1957. 331 p. (MIRA 11:7)

1. Chlen-korrespondent Vsesoyuznoy akademii sel'skokhozyaystvennykh nauk (for Anuchin). 2. Kafedra taksatsii i lesoustroystva Sibirskogo lesotekhnicheskogo instituta (for Tikhomirov, Shanin). 3. Otdel lesoustroystva Vsesoyuznogo ob"yedineniya Lesproekt (for Vzyatyshev). 4. Belorusskiy lesotekhnicheskiy institut (for Zakharov)
(Forest management)

TIKHOMIROV, B.N., dotsent; VOROB'YEVA, V.M., assistent

Moisture and volumetric weight of aspen wood in the Eastern Sayans. Trudy STI 34:73-80 '63. (MIRA 17:2)

TIKHOMIROV, Boris Nikolayevich; KOROPACHINSKIY, Igor' Yur'yevich; FALALEYEV, Eduard Nikolayevich; DVORNIKOV, P.P., red.; SVETLAYEVA, A.S., red. izd-va; LOBANKOVA, R.Ye., tekhn. red.

[Larch forests of Siberia and the Far East] Listvennichnye lesa Sibiri i Dal'nego Vostoka. Moskva, Goslesbumizdat, 1961. 163 p.
(MIRA 14:12)

(Siberia--Larch)

TIKHOMIROV, Boris Nikolayevich; BOLOTSKAYA, Ye.L., red.; BASINKEVICH, I.R., red. izd-va; PARAKHINA, N.L., tekhn. red.

[Floating larch on the rivers of Eastern Siberia] Splav listvennitsy po rekam Vostochnoi Sibiri. Moskva, Goslesbumizdat, 1959. 44 p. (MIRA 14:6)

(Siberia, Eastern—Lumber—Transportation) (Larch)

TIKHOMIROV, Boris Nikolayevich; KUDRYAVTSEV, A.V., red.

[Larch floating] Splav listvennitsy. Moskva, Lesnaia promyshlennost', 1965. 156 p. (MIRA 18:6)

BLOKH, G.A.; KORMIL'TSEVA, Z.P.; BOGUSLAVSKIY, D.B.; BAKHAREV, V.I.; TIKHOMIROV, B.P.

Studying diffusion processes in the vulcanization of automobile tire casings. Kauch. i rez. 17 no. 7:33-36 Jy '58. (MIRA 11:7)
(Tires, Rubber)
(Vulcanization)

EPSHTEYN, V.G.; SEMENOV, N.I.; TIKHOMIROV, B.P.

Use of sodium sulfite to protect the bag in the vulcanization of automobile tires. Kauch. i rez. 17 no. 7:36-37 Jy '58. (MIRA 11:7)

1. Shinnyy zavod i Tekhnologicheskiy institut g. Yaroslavl'.
(Tires, Rubber)

ТИХОМИРОВ, Б.П.

BOGUSLAVSKIY, D.B.; TIKHOMIROV, B.P.; BAKHAREV, A.I.

Using radiation from radioisotopes to determine the homogeneity of rubber mixtures. Kauch. i rez. 16 no.12:24-27 D '57. (MIRA 11:3)

1. Yaroslavskiy shinnyy zavod.
(Rubber) (Radioisotopes--Industrial applications)

SOV/138-58-7-10/19

AUTHORS: Blokh, G.A., Kormil'tseva, Z.P., Boguslavskiy, D.B., Bakharev, V.I., and Tikhomirov, B.P.

TITLE: Study of Diffusion Processes Occurring in Tyres During Vulcanisation (Part I) (Issledovaniye diffuzionnykh protsessov pri vulkanizatsii avtopokryshek) (Soobshcheniye I)

PERIODICAL: Kauchuk i rezina, 1958, Nr 7, pp 33 - 36 (USSR)

ABSTRACT: In this investigation, radioactive sulphur, S^{35}, was introduced into the tread, breaker and carcass rubber mixes and the diffusion of the isotope from each of these parts of the tyre into adjacent parts of the tyre was studied.
The appropriate rubber mixes containing the isotope sulphur were rolled into thin laminae 0.4 to 0.8 mm thickness and discs 16 mm diameter were cut from these laminae. The discs were placed under a (Geiger) counter and their radioactivity was determined before vulcanisation. Measurements were taken from both sides of the discs. The discs were then stacked into piles to form representative sections of a tyre. 30 discs represented the tread and 8 to 10 discs the breaker and the carcass.
The discs were dusted with talc to assist separation of

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the laminae after vulcanisation.
Piles of discs from mixes containing S^{35} were assembled with piles of discs from mixes containing normal sulphur in the appropriate sequences so that diffusion could be assessed for the different cases of: 1) tread to breaker to carcass; 2) breaker to tread, breaker to carcass and 3) carcass to breaker to tread. The stacked piles were vulcanised at 145 °C for half to two hours. The individual discs were then stripped from the vulcanised samples and the activity of each disc measured by the counter. Diffusion of the isotopic sulphur from discs to disc could then be assessed, as also diffusion from one part of the representative tyre section to another.
Table I shows the extent of the diffusion from the tread (where the active sulphur was originally located) into breaker and carcass. The S^{35} diffused from the tread into the breaker to a depth of 3 to 3.5 mm. The breaker rubber taking up more than 40% of the activity of the tread rubber to a depth of 0.9 mm and over 60% to a depth

0.65 mm. The diffusion did not extend to the carcass rubber where the activity remained at background level.
Table 2 shows results from a test where the active material was located in the breaker rubber and diffused both to the tread and to the carcass parts of the sample to a depth of 3 to 4 mm. Table 3 shows the results of a similar test with the S^{35} diffusing from carcass into the breaker rubber but not extending through to the tread.
Similar experiments were made by assembling layers of tread, breaker and carcass rubber but in this case all containing S^{35}. After vulcanisation at 145 °C for 2 hours, the sample was stripped and the activity of the laminae at the interfaces between the different mixes was determined and compared with the activity at the same locations before vulcanisation. The results, given in Table 4, indicate concentration of the vulcanising groups at these interfaces, through differences in chemical rate and kinetic flow during vulcanisation. Such concentrations of polysulphide groups will undergo decomposition and re-grouping while the tyre is in use because of the temperature differences that are caused by deformation. Knowledge of the extent of these

concentrations is important since it will enable the ageing and fatigue characteristics of the tyre to be assessed. The diagram has been constructed from the data in tables 1, 2 and 3 and relates the activity level to the position of measurement in the stack. The shaded areas indicate concentration of activity at the interfaces between different parts of the tyre.
Attempts to study diffusion of calcium hydroxide, using Ca^{45}, in similar experiments were unsuccessful, evidently because of the insolubility of this material in rubber.
There are 4 tables and 5 Soviet references.

1. Tires--Test methods 2. Sulfur--Diffusion 3. Sulfur isotopes (Radioactive)--Applications 4. Vulcanization

SOV/138-58-7-11/19

AUTHORS: Epshteyn, V.G., Semenov, N.I., and Tikhomirov, E.P.

TITLE: The Use of Sodium Sulphite for the Protection of Curing Bags Used in the Vulcanisation of Tyres (Primeneniye sul'fita natriya dlya zashchity varochnykh kamer pri vulkanizatsii avtopokryshek)

PERIODICAL: Kauchuk i rezina, 1958, Nr 7, pp 36 - 37 (USSR)

ABSTRACT: During vulcanisation, in processes using curing bags, sulphur diffuses from the carcass rubber into the outer surface of the bag. The bag becomes partially vulcanised after a number of operations and cracks and becomes useless.

Grease is usually applied to the interior of the tyre and to the surface of the bag to assist the forming process and improve the finish of the tyre. The grease applied to the tyre is usually a solution based on butyl rubber and benzine and that applied to the bag is an aqueous solution.

Sodium sulphite reacts freely with free sulphur and if it is present at the interface between the tyre and the bag, it will absorb the sulphur as it migrates and prevent diffusion into the curing bag. In order to study that action of the sodium sulphite, a proportion of sulphur

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The Use of Sodium Sulphite for the Protection of Curing Bags Used in the Vulcanisation of Tyres

isotope, S^{35}, was added to the carcass rubber mix and discs 3 mm thickness and 20 mm diameter made up from this mix. One such disc was then greased with the normal solution and another with a grease containing sodium sulphite. These discs were than put on top of similar-sized discs made from the rubber used for the curing bag and which had been treated with the normal water-based grease. The formula is given for this grease. The experimental grease contained 25 pbw of sodium sulphite to 100 pbw of K7 grease (100 pbw SKB rubber in 750 pbw benzine).

The specimens with the experimental grease and with normal grease were vulcanised under identical conditions. Table I shows the radioactive levels of the carcass rubber and of the curing-bag rubber after vulcanising for the two samples. The two lower rows of figures are for the Na_2SO_3 greased samples. In a further experiment, NA_2SO_3 was introduced into both the benzine-based grease

The Use of Sodium Sulphite for the Protection of Curing Bags Used in the Vulcanisation of Tyres

on the tyre and the water-based grease on the curing bag. The results of tests with similar samples are shown in Table 2. These indicate that the quantity of sulphur that has diffused from the carcass rubber into the curing bag is five times less when sodium sulphite greases are used, as compared with standard grease. The life of the curing bag will be increased due to the much slower rate of self-vulcanisation. There are 2 tables.

ASSOCIATION: Shinnyy zavod i Tekhnologicheskiy institut (Tire Factory and Technological Institute), Yaroslavl'

Card 3/3

1. Tires--Production 2. Vulcanization--Equipment
3. Sulphur--Absorption 4. Sodium sulfate--Performance

80601

S/138/60/000/01/09/010

15.9300

AUTHORS: Boguslavskiy, D.B., Tikhomirov, B.P., Epshteyn, V.G.,

TITLE: The Problem of Determining the Character of Destruction Taking Place in Rubber-Cord Systems

PERIODICAL: Kauchuk i Rezina, 1960, No. 1, pp. 51 - 53

TEXT: The usual optical-visual methods such as luminescent analyses and microscopic observation of cross cuts of cord strands are apt to give only an approximate idea of the character of foliation. An attempt is made in this article to determine the nature of foliation in rubber-cord systems by successive introduction of finely dispersed oxalate and of the radioactive isotope Sr^{90} with carrier CaC_2O_4[2] into the impregnation composition and the carcass rubber. The work was performed in accordance with two methods. The first method consisted in treating the cord strands with $Ca(Sr^{90})C_2O_4$ and after determining their radioactivity, applying them to rubber plates. After vulcanization the cords were removed and the rubber samples examined in regard to their radioactivity. The second method consists in introducing prepared oxalate $Ca(Sr^{90})C_2O_4$ into the carcass rubber from which samples 30x100 mm were cut out; impregnated strands of cord without radio-

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80601

S/138/60/000/01/09/010

The Problem of Determining the Character of Destruction Taking Place in Rubber-Cord Systems

activity were applied and the samples vulcanized. The cord strands were then removed and examined as to their radioactivity. The application of radioactive isotopes permits the determination of places and the nature of destruction occurring in rubber-cord systems. In case of impregnation of cord with 50-D composition based on SKS-30 latex containing albumin or resorcin-formaldehyde resin destruction usually takes place on the adhesive-rubber interface. With an increase in the content of resorcin-fornaldehyde resin in the impregnation composition and in the tensile strength of the films the probability of direct destruction of the adhesive decreases. The application of carboxyl-containing latex for impregnation contributes to reducing the cases of destructions of cohesion character. Films consisting of carboxyl-containing polymers have a high tensile strength which increases with the addition of resorcin-formaldehyde resin. With the simultaneous improvement of adhesion and cohesion properties of the adhesive the zone of destruction shifts in the direction of the carcass rubber. There are 2 diagrams, 3 tables and 5 Soviet references.

ASSOCIATION: Yaroslavskiy shinnyy zavod (Yaroslav Tire Plant)

Card 2/2

ACC NR: AP6037031 SOURCE CODE: UR/0069/66/028/006/0900/0903

AUTHOR: Chernykh, Z. V.; Epshteyn, V. G.; Tikhomirov, B. P.

ORG: Yaroslavl Technological Institute (Yaroslavskiy tekhnologicheskiy institut)

TITLE: Effect of chemical bonds between rubber and the filler on the strengthening of rubber

SOURCE: Kolloidnyy zhurnal, v. 28, no. 6, 1966, 900-903

TOPIC TAGS: chemical bonding, ~~rubber~~ filler, rubber, ~~rubber strengthening~~, carbon black, filler, vulcanization

ABSTRACT: An investigation was made of the reinforcement of rubber having functional groups of methylvinylpyridine and carboxyl rubber by acid channel and basic active furnace carbon black. A noticeable decrease in the diffusion coefficient of radioactive sulfur in rubber and carbon black mixtures takes place by combining the rubber with the basic functional groups and acid carbon black. The formation of ionic type chemical bonds between rubber and carbon black, in the case of combining the carboxyl rubber with basic active furnace carbon black or methyi-

Card 1/2 UDC: 541.18.02:541.64

ACC NR: AP6037031

vinylpyridine rubber with the acid channel black, does not considerably affect the value of the strength of the vulcanized rubbers at normal and increased temperatures. Orig. art. has: 1 figure and 2 tables. [Authors' abstract] [NT]

SUB CODE: 11/SUBM DATE: 02Jun65/ORIG REF: 003/OTH REF: 003/

Card 2/2

S/138/59/000/07/09/009

AUTHORS: Boguslavskiy, D. B., Tikhomirov, B.P., Blokh, G. A.

TITLE: A Study of the Diffusion Processes in the Vulcanization of Automobile Tire Casings. Communication 2.

PERIODICAL: Kauchuk i Rezina, 1959, No. 7, pp. 47-50

TEXT: The authors briefly summarize the results of work carried out previously on the diffusion processes in rubbers and vulcanizates, referring to Ref. 1-9. The present article deals with the data obtained on the kinetics of sulfur and accelerator (captax) diffusion from the reinforcement rubber into the adhesive film which, in turn, is based in its composition on carboxyl-containing and 2-methyl-5-vinylpyridine copolymers. It is pointed out that at the present time the significance of impregnating tire cord with latex copolymers, having active functional groups in the molecular chains, is continuously increasing, as the latter affects the properties of vulcanizates depending on the content of sulfur and accelerators. Thus, the diffusion redistribution of the concentration of the vulcanizing agents can have a great effect on the mechanical properties of the adhesives. The experimental procedure undertaken is outlined, and it is established as a result that the rate of diffusion depends on the density of

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S/138/59/000/07/09/009

A Study of the Diffusion Processes in the Vulcanization of Automobile Tire Casings. Communication 2.

the vulcanizing lattice of the adhesive, on the type and content of the functional groups in the molecular chain of the coplymers and the dosages of the resorcin-formaldehyde resin. The various natures of the resorcin-formaldehyde resin's interaction with the carboxyl-containing and methylvinylpyridine copolymers, is pointed out. In discussing the obtained experimental data, it is also pointed out that the presence of the impregnating compositions of the carboxyl-containing and methylvinylpyridine latexes, in the adhesive, has a double effect: on the one hand, they increase the interaction of the molecules of the impregnated film and the reinforcement rubber, and, on the other hand, they have a significant effect on the elasticity of the molecular chains, reducing their diffusibility. It is noted that the degree of intermolecular action increases much more rapidly with the introduction of metacrylic acid into the chain. The authors state, however, that the obtained experimental data do not enable one to clearly identify the nature of the bonds occurring between the resorcin-formaldehyde resin and the molecules of the investigated polymers. There are 4 tables, 1 diagram, 3 graphs, 13 references: 12 Soviet, 1 English.

ASSOCIATION: Yaroslavskiy shinnyy zavod (Yaroslavl' Tire Plant)

Card 2/2

DUBROV, M.M., inzh.; LEVIN, M.L., kand. tekhn. nauk; PIMONIROV, B.V., inzh.

Automation of marine diesel power plants. Sudostroenie 30 no.9:
4-8 S '64. (MIRA 17:11)

L 15588-63 EPA/EWR/EWG(s)-2/EPF(c)/EWT(l)/EWT(m)/BDS/ES(s)-2/ES(v)
AEDC/AFFTC/ASD/APGC/SSD Paa-4/Ps-4/Pw-4/Pr-4/Pt-4/Pe-4 WW/JW

ACCESSION NR: AP3006675 S/0286/63/000/008/0034/0034 93

AUTHOR: Golubov, V. I.; Sobolenko, V. Ye.; Tikhomirov, B. V.; Kalmy*kov, N. N.

TITLE: Nozzle for combustion of liquid fuel. Class 24, No. 153992

SOURCE: Byul. izobreteniy i tovarny*kh znakov, no. 8, 1963, 34

TOPIC TAGS: fuel nozzle, liquid fuel combustion, liquid fuel, combustion

ABSTRACT: The patent introduces a nozzle for the combustion of liquid fuel (see Fig. 1 of Enclosure). The nozzle has a body with passages for fuel and atomizing agent. The head contains supporting, fuel, and terminal disks. To ensure the continuous operation of the nozzle in a wide range of operating pressures and with decreasing consumption of atomizing agent the fuel disk is equipped with tangential ducts and a chamber for swirling the fuel before it is fed into the discharge orifice. The fuel and terminal disks are provided with face and axial gaps into which the atomizing agent is fed. Orig. art. has: 1 figure.

ASSOCIATION: none

Card 1/1

TIKHOMIROV, D.F.

Cirucit for the switching-in of staff devices on a switching center. Avtom.telem.i sviaz' 3 no.10:34 O '59.
(MIRA 13:2)

1. Starshiy elektromekhanik Volkhovstroyevskoy distantsii signalizatsii i svyazi Oktyabr'skoy dorogi.
(Railroads--Electronic equipment)

LADYGIN, P.F.; ZHUL'KOV, V.F.; LAVENETSKIY, F.A.; TIKHOMIROV, D.F.; KOZHEVNIKOV, A.I.; IVANOV, M.

Discussion of the article "Pedal or track circuit?" Avtom., telem. i sviaz' 9 no.9:39-40 S '65. (MIRA 18:9)

1. Revizory po bezopasnosti dvizheniya Severnoy dorogi (for Ladygin, Zhul'kov, Lavenetskiy). 2. Starshiy elektromekhanik Volkovstroyevskoy distantsii Oktyabr'skoy dorogi (for Tikhomirov). 3. Zamestitel' nachal'nika 12-y distantsii Kuybyshevskoy dorogi (for Kozhevnikov). 4. Starshiy inzh. sluzhby signalizatsii i svyazi Kuybyshevskoy dorogi (for Ivanov).

BOGUSLAVSKIY, D.B.; TIKHOMIROV, B.P.; EPSHTEYN, V.G.

Determining the nature of the deterioration of rubber-cord systems. Kauch.i rez. 19 no.1:51-53 Ja '60. (MIRA 13:5)

1. Yaroslavskiy shinnyy zavod.
(Tire fabrics) (Materials--Deterioration)

AGAFOV, Sergey Vasil'yevich; SOKOLOV, Sergey Nikolayevich; TIKHOMIROV, Dmitriy Ivanovich; FISHCHEVA, T.V., red.; BORISKINA, V.I., red.kart; KORNEYEVA, V.I., tekhn. red.

[Geographical dictionary] Geograficheskii slovar'. Moskva, Gos. uchebno-pedagog. izd-vo M-va prosv. RSFSR, 1961. 155 p. (MIRA 15:4)
(Geography--Dictionaries)

SEMENOV, A.I., otv.red.; FILIPPOV, Yu.V., prof., doktor tekhn.nauk, red.; BASHLAVIN, V.A., kand.tekhn.nauk, red.; VOYNOVA, V.V., red.; GURARI, Ye.L., kand.ekonom.nauk, red.; GUREVICH, I.V., red.; ZHIV, I.S., red.; ZARUTSKAYA, I.P., red.; ZASLAVSKIY, I.I., red.; KOZLOV, F.M., red.; NIKISHOV, M.I., kand.geograf.nauk, red.; SADCHIKOV, S.F., red.; TIKHOMIROV, D.I., red.; TUTOCHKINA, V.A., red.; BALANTSEVA, I.A., red. kart; BOGDANOVA, L.A., red.kart; BOCHAROVA, I.L., red.kart; VENEVTSEVA, G.P., red.kart; VOLKOVA, A.P., red.kart; GOSTEVA, N.A., red.kart; YEFIMOVA, G.N., red.kart; ZHIV, D.I., red.kart; KRAVCHENKO, A.V., red. kart; KUBRIKOVA, N.S., red.kart; KUZNETSOVA, N.A., red.kart; KURSAKOVA I.V., red.kart; LOBZOVA, N.A., red.kart; MERTSALOVA, L.M., red.kart; MOSTMAN, S.L., red.kart; PANFILOVA, M.V., red.kart; SEMENOVA, V.D., red.kart; SMIRNOVA, T.N., red.kart; TERESHKOVA, V.S., red.kart; FEDOROVSKAYA, G.P., red.kart; FETISOVA, N.P., red.kart; FIL'GUS, Z.Kh., red.kart; SHAPIRO, Ye.M., red.kart; SHISHKIN, Ye.A., red.kart; YASHUNICHKINA, Ye.G., red.kart. V razrabotke kart prinimali uchastiye: ALISOV, B.A., prof.; BERZINA, M.Ya.; VASILEVSKIY, L.I.; GAVRILOVA, S.A., kand.geograf.nauk; GINZBURG, G.A., kand.tekhn.nauk; DOBOSHINSKAYA, I.B.; YEVSTIGNEYEVA, A.I.; LAVRENKO, Ye.M., prof.; LOZINOVA, V.M., kand. tekhn.nauk; MILANOVSKIY, Ye.Ye., kand.geologo-mineral.nauk; MIKHAYLOV, A.A., prof.; MYSHKIN, Ye.P.; PUZANOVA, V.F., kand.geograf.nauk;

(Continued on next card)

SEMENOV, A.I.---(continued) Card 2.
ROZOV, N.N., prof.; SMIRNOV, D.I.; TARASOV, A.P.; TROFIMOVSKAYA, Ye.A., kand.geograf.nauk; TUGOLESOV, D.A., kand.geologo-mineral. nauk. ZININ, I.F., tekhn.red.

[Geographical atlas for secondary school teachers] Geograficheskii atlas; dlia uchitelei srednei shkoly. Izd.2. Moskva, Glav.upr. geodezii i kartografii MVD SSSR, 1959. 191 p. (MIRA 12:11)

1. Predstavitel' Nauchno-issledovatel'skogo instituta metodov obucheniya Akademii pedagogicheskikh nauk RSFSR (for Zaslavskiy). 2. Predstavitel' Upravleniya shkol Ministerstva prosvyashcheniya RSFSR (for Tutochkina). 3. Chleny-korrespondenty AN SSSR (for Lavrenko, Mikhaylov).
(Maps)

TIKHOMIROV, D.N., polkovnik med. sluzhby

Surgical treatment of complications of peptic ulcer. Voen. med. zhur. no.2:76-79 F '59. (MIRA 12:7)
(PEPTIC ULCER, compl.
surg. (Rus))

TIKHOMIROV, D.N. (Kiyev, ul. Krasnoarmeyskaya, d.90a, kv.44)

Phlegmon of the small intestine. Nov.khir. arkh. no.3:88 My-Je '60. (MIRA 15:2)
(PHLEGMON) (INTESTINES--DISEASES)

TIKHOMIROV, E.

Shooting at whales. IUn.nat. no.5:32 '61. (MIRA 14:4)
(Whales)

BERZIN, A.A.; TIKHOMIROV, E.A.; TROYNIN, V.I.

Is Steller's sea cow extinct? Priroda 52 no.8:73-75 Ag '63.
(MIRA 16:9)

1. Tikhookeanskiy nauchno-issledovatel'skiy institut rybnogo khozyaystva i okeanografii, Vladivostok.
(Sea cow)

TIKHOMIROV E.A.

Distribution and migrations of seals in Far Eastern waters.
Trudy sov. Ikht. kom. no.12:199-210 '61. (MIRA 14:6)

1. Tikhookeanskiy nauchno-issledovatel'skiy institut morskogo rybnogo khozyaystva i okeanografii.
(Soviet Far East--Seals(Animals))

L 29079-66 EWT(m)/EWP(1)/T IJP(c) WW/RM/WB

ACC NR: AP6021974 (A) SOURCE CODE: UR/0153/66/009/002/0314/0316

AUTHOR: Kazanskaya, V. F.; Klimova, O. M.; Tikhomirov, E. A.; Sokolov, G. I.

ORG: Plastics Technology Department, Leningrad Technological Institute im. Lensovet (Kafedra tekhnologii plasticheskikh mass, Leningradskiy tekhnologicheskiy institut)

TITLE: Copolymerization of vinylene carbonate with acrylonitrile in aqueous solutions

SOURCE: IVUZ. Khimiya i khimicheskaya tekhnologiya, v. 9, no. 2, 1966, 314-316

TOPIC TAGS: acrylonitrile, carbonate, copolymerization

ABSTRACT: Vinylene carbonate (VC) was copolymerized with acrylonitrile (AN) in 8% aqueous solutions at 20°C without adding any special initiators. All the copolymers were purified by reprecipitation from a dimethyl sulfoxide - acetone mixture, the degree of conversion was determined gravimetrically, and the copolymer composition was obtained from ultimate analysis. The relative activity constants of VC and AN were calculated from the dependence of the copolymer composition on the composition of the initial VC - AN mixture, and found to be: for VC, $r_1 = 0.086 \pm 0.051$; for AN, $r_2 = 3.280 \pm 0.117$. The specific activity Q for VC was 0.043, and the polarity factor $e = -0.41$. The intramolecular distribution of monomer units in the copolymers was calculated. The probability of finding two consecutive VC units is very small, even for an 80:20 ratio of AN to VC in the initial mixture; hence, the copolymer molecule

Card 1/2 UDC: 678.744.4-134.532

L 39279-66

ACC NR: AP6021974

is a chain consisting of large blocks of AN units which include single VC units. The VC-AN copolymers are similar in properties (solubility, capacity to form films or fibers) to polyacrylonitrile. Orig. art. has: 1 figure and 2 tables.

SUB CODE: 11/ 07/ SUBM DATE: 26Oct64/ ORIG REF: 004/ OTH REF: 005

Card 2/2 mlp

L 05087-67 EWT(d)/EWP(v)/EWP(k)/EWP(h)/EWP(l)

ACC NR: AP6013254 SOURCE CODE: UR/0413/66/000/008/0042/0043

AUTHORS: Zusman, V. G.; Tikhomirov, E. L.; Reshetilov, I. D.; Rozanov, L. V.

ORG: none

TITLE: A device for automatic smooth braking and accelerating according to a linear law for a system of programmed control. [Class 21, No. 180675 [announced by Experimental Scientific Research Institute of Metal Cutting Machine Tools (Eksperimental'nyy nauchno-issledovatel'skiy institut metallorezhushchikh stankov)]

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 8, 1966, 42-43

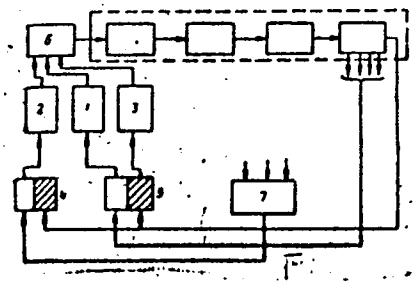
TOPIC TAGS: linear automatic control system, computer programming, metal cutting machine tool

ABSTRACT: This Author Certificate presents a device for automatic smooth braking and accelerating, based on a linear law, for a system of programmed control. The device includes a linear voltage shaper, a converter from a numerical code to a unitary code, counters, commutators, and a generator with a variable cyclic

Card 1/2 UDC: 621.3.078.4

L 05087-67
ACC NR: AP6013254

Fig. 1. 1-3 - linear voltage shapers;
4 and 5 - commutators;
6 - cyclic generator;
7 - comparison device



frequency (see Fig. 1). The design provides braking down to a single minimum speed and eliminates bursts of speed when changing from one card of the program to another card. Two auxiliary linear voltage shapers are installed in the device. The commutators are connected to the inputs of the shapers. The outputs of the shapers are connected to the cylcic generator. The comparison device is connected to the inputs of the commutators. A voltage with a frequency corresponding to the minimum speed of motion of the object being regulated is fed to the input of the comparison device. Orig. art. has: 1 figure.
SUB CODE: 09, 13/ SUBM DATE: 06Jul64

Card 2/2 LC

TIKHONIROV, E. N.

Primenenie graficheskikh metodov dlia zadach maloi zhestkosti pri peremennom poperechnom sechenii brusa. (Tekhnika vozdushnogo flota, 1940, no. 9, p. 52-56, tables, diagrs.)

Title tr.: Use of graphical methods of solving problems pertaining to beams of variable sections with the low section modulus.

TL504.T4 1940

TIKHOMIROV, F. and RAVKOVA, P. (Veterinarians)

"Work experience of the Gvardeyskiy (Guard) Zooveterinary District."

SO: Veterinariya 30 (8), August 1953

TIKHOMIROV, F., inzh.

Problem of the upper Volga. Rech. transp. 21 no.3:35-37 Mr '62. (MIRA 15:4)
(Volga Valley--Hydraulic engineering)

TIKHOMIROV, F.A.

MENZEL, Donald H., red.; KAZARNOVSKIY, M.V. [translator]; TIKHOMIROV, F.A. [translator]; ARNOL'D, N.A. [translator]; PETRUKHIN, V.I. [translator]; MATSOMASHVILI, B.N. [translator]; AKSENOV, S.I. [translator]; BAKANOV, S.P. [translator]; SHAPIRO, I.S., red.; ADIROVICH, E.I., red.; MEDVEDEV, Yu.T., red.; MAKHIMSON, I.G., red.; TELESNIN, N.L., red.; BELEVA, M.A., tekhn.red.

[Fundamental formulas of physics. Translated from the English] Osnovnye formuly fiziki. Moskva, Izd-vo inostr. lit-ry, 1957. 657 p. (MIRA 11:5)
(Mathematical physics)

TIKHOMIROV, F.A.

BELOVITSKIY, G. E., ROMANOVA, T. A. and TIKHOMIROV, F. A.

"Uranium Fission Induced by Slow- -Mesons."

paper to be presented at the 2nd UN Intl. Conf on the peaceful uses of Atomic Energy, Geneva, 1 - 13 Sept 58.

BELOVITSKIY, G.Ye.; KASHCHUKEYEV, N.T.; MUKHUL, A.; PETRASHKU, M.G.; ROMANOVA, T.A.; TIKHOMIROV, F.A.

Mechanism of uranium fission induced by slow μ^--mesons. Zhur.eksp.i teor.fiz. 38 no.2:404-408 F '60. (MIRA 14:5)

1. Ob"yedinennyy institut yadernykh issledovaniy i Fizicheskiy institut im. P.N.Lebedeva Akademii nauk SSSR.
(Uranium--Isotopes) (Mesons) (Nuclear fission)

32991
S/641/61/000/000/010/033
B108/B102

24.6500

AUTHORS: Mikhaylina, K. N., Nomofilov, A. A., Romanova, T. A., Sviridov, V. A., Tikhomirov, F. A., Tolstov, K. D.

TITLE: Interaction of 14.1-Mev neutrons with Li^6 and Li^7

SOURCE: Krupchitskiy, P. A., ed. Neytronnaya fizika; sbornik statey. Moscow, 1961, 249 - 257

TEXT: Interaction of 14.1-Mev neutrons with Li^6 and Li^7 nuclei was studied both with targets prepared from Ilford E_1 photoemulsions bearing the lithium and with targets of metallic lithium isotopes. The latter method was used for small angles of the departing particles. The mean number of Li nuclei in the photoemulsion was $2.3 \cdot 10^{19}$ cm^{-2}. The integral neutron flux striking the emulsion at right angles was about 10^8 cm^{-2}. Altogether, 412 events were recorded on a 2.5 cm^2 area. 96 events were from the reaction $Li^6(n,t)\alpha$ with a cross section $\sigma = 27 \pm 6$ mb. Seven $Li^6(n,p)He^6$ reactions with a cross section of about 5 mb [illegible] found, however

Card 1/2

Interaction of 14.1-Mev...

$Li^6(n,d)He^5$ reactions with a differential cross section of 2.15 to 2.5 mb/sterad in the range between 70 and 142°. The cross section of the $Li^6(n,n')Li^{6*} \longrightarrow d + \alpha$ events was 70 ± 12 mb, that of the reaction $Li^6(n,2n)Li^{5*} \longrightarrow \alpha + p$ was equal to 50 ± 10 mb. Interaction with Li^7 yielded the reactions $Li^7(n,t)He^5$, $Li^7(n,n')Li^{7*}$, and seven $Li^7(n,d)He^6$ events. In the experiments with pure lithium targets the reactions observed were $Li^6(n,d)He^5$ (σ = 50 ± 10 mb), $Li^7(n,t)He^5$ (50 ± 12 mb), $Li^7(n,n')Li^{7*} \longrightarrow t + \alpha$, $Li^7(n,d)He^6$. The overall cross section of (n,n') and (n,2n) processes for Li^6 was 179 ± 20 mb. The results obtained are consistent with those of other publications. I. M. Frank, O. I. Kozlenta, L. N. Katsnurov, and D. I. Ivanov are thanked for help. There are 6 figures, 1 table, and 7 references: 2 Soviet and 5 non-Soviet The four most recent references to English-language publications read as follows: Frye, G. M. Phys. Rev., 93, 1086 (1954); Battat, M. E., Ribe, F. L. Phys. Rev., 89, 80 (1953); Frye, G. M., Rosen, L. Phys. Rev. 90, 381 (1953); Moak, C. D. Phys. Rev., 92, 383 (1953).

Card 2/2

TIKHOMIROV, F., veterinarnyy vrach; RAVKOVA, P., veterinarnyy vrach.

Practices of the Gvardeyskiy zooveterinary sector. Veterinariia 30 no.8:8-9 Ag '53. (MLRA 6:8)

KUZNETSOV, I.A. (Moskva); TIKHOMIROV, F.A. (Moskva)

Larvae Caspian waterway. Priroda 54 no.1:87-90 Ja '65.
(MIRA 18:2)

USSR/Meadow Science. L.

Abs Jour : Ref Zhur - Biol., No 4, 1958, 15432

Author : F.K. Tikhomirov

Inst : Kherson Agricultural Institute.

Title : On the Uses of Natural Pastures; (Ob ispol'zovanii yestestvennykh pastbishch).

Orig Pub : Nauchn. zap. Khersonsk. s. kh. in-t, 1957, vyp. 6, 174-188.

Abstract : The study of high altitude pastures (2900-3700 meters above sea level) are described: the wormwood and grassy semi-desert, the Festuca sulcata and feather grass steppe, the subalpine mixed grass and meadow grass steppe, and the alpine Cobresia meadow pastures. The botanical characteristics of the pastures are demonstrated as is the effect of various spoilage rates

Card 1/2

USSR/Meadow Science. L.

Abs Jour : Ref Zhur - Biol., No 4, 1958, 15432

(through grazing) on their productivity. It is noted that grazing twoce in the course of a year and an annual mowing of the grass even during the period of fruit sprinkling and non-irrigated hay cutting lowers the productivity of the pastures. It is recommended that the grasses be mowed in a year's time.

Card 2/2

4

COUNTRY : USSR
CATEGORY : CULTIVATED PLANTS. Grains, Leguminous Grains, Tropical Crops.
ABS. JOUR. : RZBiol., No. 2, 1958, No. 7583
AUTHOR : Tikhomirov, F.K.
INST. : --
TITLE : Methods of Sowing Winter Wheat

ORIG. PUB. : Zemledeliye, 1957, No1 8, 69-71

ABSTRACT : In southern Ukraine on the farms at Khersonskaya and Nikolayevskaya Oblasts narrow-row and cross-row methods of planting winter wheat produced lesser yields than plain row planting.

CARD: 1/1

Q-1

USSR / Farm Animals, General Problems

Abs Jour: Ref Zhur-Biol., No 2, 1958, 7122

Author : F. K. Tikhomirov
Inst : Kherson Agricultural Institute
Title : A Study of the Digestive Aspects of Grass in Pasturages

Orig Pub: Nauchn. zap. Khersonsk. s-kh. in-ta, 1957, vyp. 6, 259-264

Abstract: A study was made of sheep, of the food value of the grass of pastures at high altitudes in Central Asia. It was revealed that the digestibility of the grass decreased by 30 percent during the period (one month and a half) from the tubular shape stage of the grass to its blossoming stage. During this period, the nutrition value of 100 kilograms of steppe grass [Festuca sulcata] de-

Card 1/2

USSR / Farm Animals, General Problems Q-1

Abs Jour: Ref Zhur-Biol., No 2, 1958, 7122

Abstract: creased from 32.8 to 19.1 feed units, while the nutrition value of subalpine meadow grass remained at the same level (25 kilograms of feed units to 100 kilograms of grass). The process of drying grass collected from subalpine meadows in its budding stage (without mechanical loss) decreased the food value of this feed by one fourth, while grass from steppe pastures showed a somewhat smaller loss of food value.

Card 2/2

TIKHOMIROV, F.K., professor.

Methods of sowing winter wheat. Zemledelie 5 no.3:69-71 Ag '57.
(MLRA 10:9)

1. Khersonskiy sel'skokhozyaystvennyy institut.
(Wheat) (Sowing)

TIKHOMIROV, Fedro Konstantinovich; KUZNETSOV, P.A., red.

[Botany] Botanika. Moskva, Vysshaia shkola, 1964. 379 p.
(MIRA 17:6)

1. TIKHOMIROV, G.
2. USSR (600)
4. Community Centers
7. In the course of the new five-year plan, Klub no. 12, 1952.

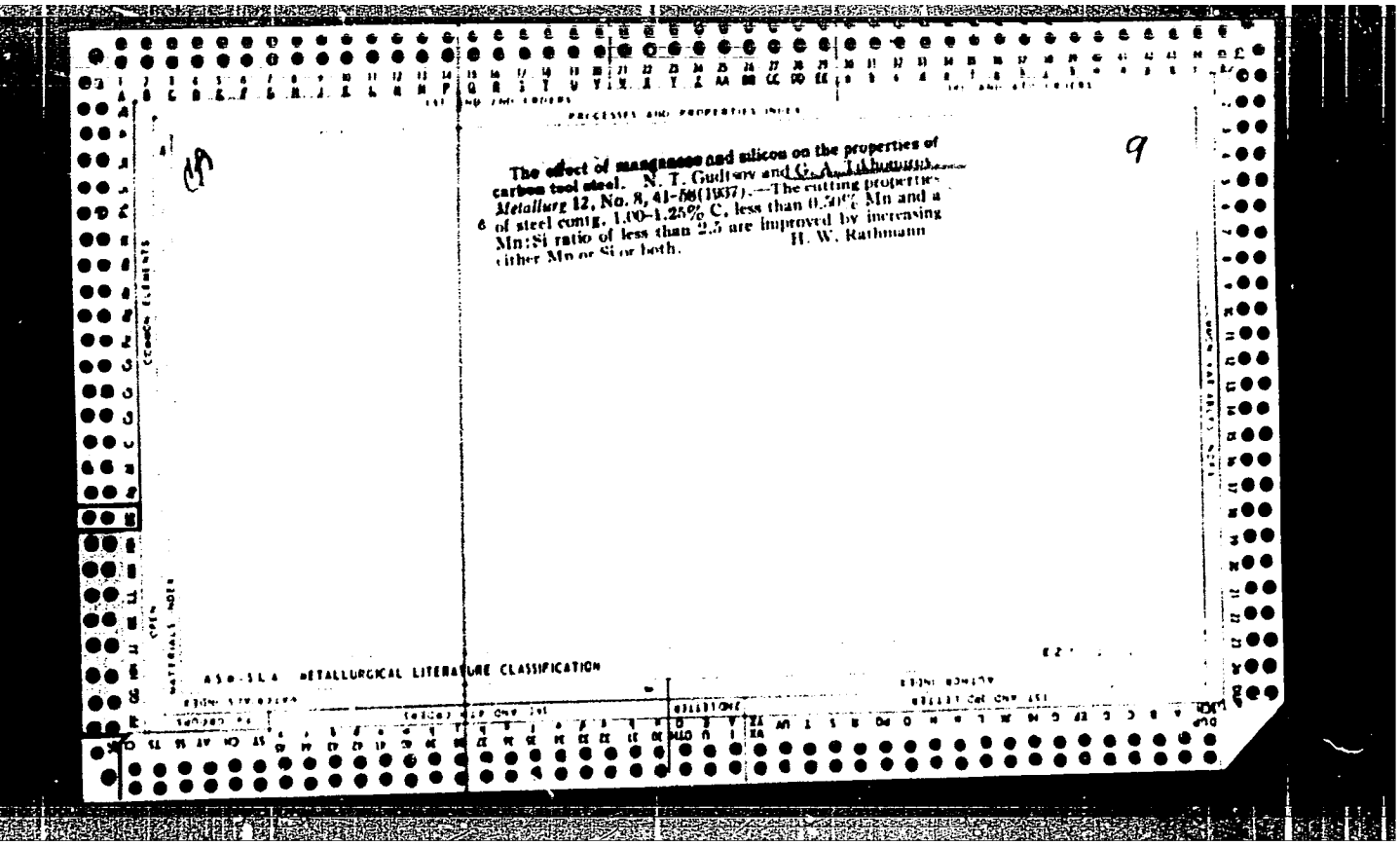
9. **Monthly List of Russian Accessions**, Library of Congress, May 1953. Unclassified.

TIKHOMIROV, G.B., inzhener

Centralized repair and molding of transformers. Elek.i tepl.tiaga no.10:32-33 O '57. (MIRA 10:11)

1. Remontnyy tsekh Permskogo uchastka energosnabzheniya Sverdlovskoy dorogi.

(Electric transformers)



The effect of manganese and silicon on the properties of carbon tool steel. N. T. Gudtsov and G. A. Likhanova. *Metallurg* 12, No. 8, 41-58(1937).—The cutting properties of steel contg. 1.00–1.25% C, less than 0.30% Mn and a Mn:Si ratio of less than 2.5 are improved by increasing either Mn or Si or both. H. W. Rathmann

A S M - S L A METALLURGICAL LITERATURE CLASSIFICATION

LEGKOY, G.V., inzh.; TIKHOMIROV, G.A., inzh.

Pouring joints of concrete pavements on the Moscow-Gorkiy road.
Avt. dor. 28 no.9:5-6 S '65. (MIRA 18:10)

ACCESSION NR: AP4043608 S/0056/64/047/002/0400/0403

AUTHORS: Grigor'yev, V. K.; Grishin, A. P.; Vladimirskiy, V. V.; Trostina, K. A.; Yerofeyev, I. A.; Tikhomirov, G. D.

TITLE: Investigation of the reaction $\pi^+ + p \rightarrow p + \pi^- + \pi^+ + \pi^-$ at 2.8 BeV energy

SOURCE: Zh. eksper. i teor. fiz., v. 47, no. 2, 1964, 400-403

TOPIC TAGS: pi meson product, negative pi meson, positive pi meson, pion scattering, scattering cross section, resonance scattering

ABSTRACT: The experimental material used by Yu. V. Trebukhovskiy et al. (Phys. Lett., v. 6, 190, 1963) to investigate the reaction $\pi^- + p \rightarrow p + \pi^- + \pi^0 + \pi^0$ (1) at a primary pion momentum 2.8 BeV/c, was used by the authors to analyze the analogous reaction with charged pions in the final state, namely $\pi^- + p \rightarrow p + \pi^- + \pi^+ + \pi^-$ (2). About 70% of the photographs (total 30,000) obtained in the earlier

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ACCESSION NR: AP4043608

investigation were used, and 550 events were selected to check the distribution of the latter reaction relative to the three pion mass. The selection criteria are briefly described. The value obtained for the ratio of the cross sections of reaction (2) to that of (1) (0.8 ± 0.4) offers evidence that these reactions are more likely to proceed via three-pion resonance than via formation of ρ and Δ resonances (ρ meson and Δ isobar). The irregularity in the three-pion-mass distribution in the vicinity 0.9--1.0 BeV/c^2 indicates that three-pion resonance can exist with T = 1 or T = 2 (T -- isotopic spin). "The authors are grateful to V. A. Shebanov, Yu. S. Krestnikov, and V. V. Barmin for supplying the material, to Yu. V. Trebukhovskiy for participating in the work during its earlier stage and for useful discussion, Ye. M. Lapidus, V. M. Polyakova, and V. N. Lyakhovitskiy for guidance of the mathematical reduction of the measurement data, to the accelerator crew, and to the computer crew for collaboration. Orig. art. has: 4 figures and 8 formulas.

ACCESSION NR: AP4043608

ASSOCIATION: Institut teoreticheskoy i eksperimental'noy fiziki (Institute of Theoretical and Experimental Physics)

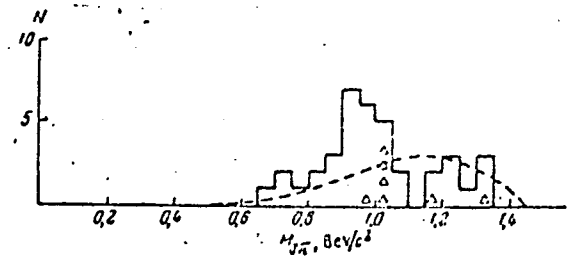
SUBMITTED: 29Jan64 ENCL: 02

SUB CODE: NP NR REF SOV: 001 OTHER: 002

Card 3/5

ACCESSION NR:AP4043608

ENCLOSURE: 01

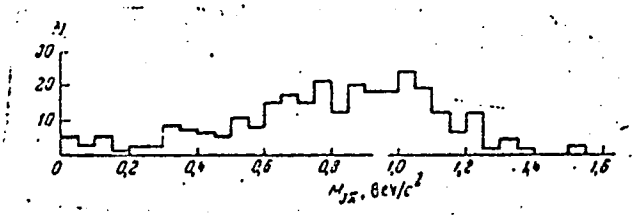


Distribution of events relative to the three-pion mass for the interval between 2.75 and 2.90 BeV. The triangles denote events satisfying the hypothesis $\pi^- + p \to \Delta^0 + p^0 \to p + \pi^- + \pi^+ + \pi^-$

Card 4/5

ACCESSION NR: AP4043608

ENCLOSURE: 02



Three-pion mass distribution for total energy larger than 2.90 BeV

Card 5/5

ACCESSION NR: AP4012528 S/0056/64/046/001/0099/0105

AUTHORS: Trebukhovskiy, Yu. V.; Yerofeyev, I. A.; Tikhomirov, G. D.

TITLE: Investigation of inelastic collisions between 2.8 BeV/c negative pions and protons

SOURCE: Zhurnal eksper. i teoret. fiz., v. 46, no. 1, 1964, 99-105

TOPIC TAGS: pion proton interaction, pion proton collision, inelastic pion proton collision, Rho meson, mass deficit, residual mass, momentum transfer

ABSTRACT: The reaction $\pi^- + p \rightarrow p + \pi^- + m\pi^0$ with 2.8 BeV/c pions on hydrogen was investigated in a 17-liter propane-xenon bubble chamber. The production of a ρ^- meson is demonstrated, with a cross section $\sigma = 0.30 \pm 0.07$ mb in the momentum-transfer region 0.2--0.4 BeV/c. The distribution relative to the residual masses shows a peak at $M_x = 1.00 \pm 0.01$ BeV with a half width 60 ± 20 MeV, cor-

Card 1/1

ACCESSION NR: AP4012528

responding to a final state π^-, π^0, π^0. The isospin of this state is $T \geq 1$ and the cross section is $\sigma = 0.16 \pm 0.05$ mb in the range of momentum transfer to the proton 0.2--0.4 BeV/c. "The authors are grateful to the operating crew of the ITEF accelerator and to the scanning crew of the ITEF for collaboration in the work; to Academician A. I. Alikhanov for suggesting the problem and for critical analysis of the results; to V. V. Vladimirskiy and B. L. Ioffe for a discussion of the results and for critical remarks; to V. A. Kolkunov for calculation of the phase curves; to V. V. Barmin, Yu. S. Krestnikov, A. G. Meshkovskiy, A. G. Dolgolenko, and V. A. Shebanov for help with the work and for a discussion of the results." Orig. art. has: 7 figures and 3 formulas.

ASSOCIATION: Institut teoreticheskoy i eksperimental'noy fiziki (Institute of Theoretical and Experimental Physics)

Card 2/3

GRIGOR'YEV, V.K.; GRISHIN, [illegible]; VLADIMIRSKIY, V.V.; [illegible], A.A.; YEROFEYEV, I.A.; TIKHOMIROV, G.[illegible].

Study of the reaction $\pi + p \rightarrow n + \pi + \pi + \pi$ at an energy of 2.8 Bev. Zhur. eksp. i teor. fiz. 47 no.2:[illegible] Ag '64.

([illegible])

1. Institut teoreticheskoy i eksperimental'noy fiziki Gosudarstvennogo komiteta po ispol'zovaniyu atomnoy energii.

TIKHOMIROV, Genrikh Mikhaylovich, starshiy prepodavatel'

Parametric representation of the hysteresis loop. Izv.vys.ucheb. zav.; elektromekh. 5 no.1:10-14 '62. (MIRA 15:2)

1. Tanganroskiy radiotekhnicheskiy institut.
(Hysteresis) (Ferrates)

TIKHOMIROV, Genrikh Mikhaylovich, starshiy prepodavatel'

Formula for determining the area of hysteresis loop. Izv.vys. ucheb. zav.; elektromekh. 3 no.10:18-19 '60. (MIRA 14:4)

1. Tanganrogskiy radiotekhnicheskiy institut.
(Hysteresis)

88167

S/144/60/000/010/002/010
E201/E391

A Formula for the Area of the Hysteresis Loop

where J_o and J_1 are the zero and first-order Bessel functions of the first type.
There 2 references: 1 Soviet and 1 non-Soviet.

ASSOCIATION: Taganrogskiy radiotekhnicheskiy institut (Taganrog Radiotechnical Institute)

SUBMITTED: August 13, 1960

Card 2/2

69193

S/144/60/000/01/001/019

E192/E182

24.7700

AUTHOR: Tikhomirov, G.M., Senior Lecturer

TITLE: Approximate Formula for the Remagnetization Time of Ferrites

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Elektromekhanika, 1960, Nr 1, pp 3-7 (USSR)

ABSTRACT: If a ferrite cell consists of a single winding and does not include any capacitance, the differential equation relating the magnetic field H and time t is (Ref 1):

$$\frac{dH}{dt} = \frac{\frac{E}{w_1 S \mu_o} - \frac{r R_1}{w_1^2 S \mu_o} \cdot H}{\cos\varphi \pm \frac{H \cdot \sin\varphi}{H_m \sqrt{1 - \left(\frac{H}{H_m}\right)^2}}} \qquad (1)$$

$$1 + \frac{2B_m k}{\sqrt{2\pi} H_m \mu_o} \exp\frac{k^2}{2}\left[\frac{H}{H_m}\cos\varphi \mp \sin\varphi \sqrt{1 - \left(\frac{H}{H_m}\right)^2}\right]^2$$

The particular solution of this equation with respect to

S/144/60/000/01/001/019
E192/E182

Approximate Formula for the Remagnetization Time of Ferrites

t is not as yet known and it is therefore difficult to investigate the processes occurring in ferrites. However, the numerical solution of Eq (1) for the initial conditions $H = 0$ at $t = 0$ was determined in the earlier paper (Ref 1) and the results are indicated in Table 1, p 4. From the table it is seen that the second terms of the denominator in Eq (1) (this is represented by Eq (2)) influences $H = H(t)$ only over an interval (H_1, H_2), while outside this interval Eq (2) assumes values from 10^{-3} to 10^{-100}. It is therefore possible to regard Eq (1) as linear outside the interval (H_1, H_2). This region includes also the coercive force H_c. At H_c Eq (1) can be written as Eq (4). In the region $(0, H_1)$ Eq (1) can be regarded as being linear. Consequently, if $B = B_0(1 - e^{-\gamma t})$, the solution of Eq (1) is given by Eq (5). It is assumed that a line $H - H_1 = k^*(t - t_1)$ passes through the point (t_2, H_2). The parameter k^* represents the slope of the line. The time $t_2 - t_1 = \tau$ can be regarded as the remagnetization time for the ferrite. The expression for τ is therefore given by

Card 2/4

S/144/60/000/01/001/019
E192/E182

Approximate Formula for the Remagnetization Time of Ferrites

Eq (6), in which it is necessary to determine $H_2 - H_1$. These quantities can be found from Eq (9), where it is assumed that Δ (defined by Eq (7)) is a known quantity. By solving Eq (9) it is shown that:

$$H_2 - H_1 = 2H_m \cos\varphi \cdot \Delta \qquad (11)$$

so that τ is given by Eq (12), where Δ should be found from Eq (13). Finally, the expression for τ can be written as Eq (14), where ε (defined by Eq (8)) is as yet an arbitrary quantity. It is shown that ε can be chosen in the form of the last equation on p 6, so that the expression for τ is in the form of Eq (15). The parameter p in this equation can be assumed to be equal to 2 or e. If p = e, Eq (15) can be written as Eq (16). The value of τ found from Eq (16) is in reasonable agreement with that taken from Table 1.

There are 1 table and 1 Soviet reference.

4

69193
S/144/60/000/01/001/019
E192/E182

Approximate Formula for the Remagnetization Time of Ferrites

ASSOCIATION: Taganrogskiy radiotekhnicheskiy institut
(Taganrog Radio-engineering Institute)

SUBMITTED: September 15, 1959

Card 4/4

4

TIKHOMIROV, Genrikh Mikhaylovich, starshiy prpodavatel'

Approximate time formula for magnetic polarity reversal of ferrites. Izv.vys.ucheb.zav.; elektro-mekh. 3 no.1:3-7 '60. (MIRA 13:5)

1. Taganrogskiy radiotekhnicheskiy institut.
(Ferrates)

SOV/144-59-6-1/15

AUTHOR: Tikhomirov, G.M., Senior Lecturer

TITLE: Representation of the Equation of a Hysteresis Loop by Means of an Integral with a Variable Upper Limit

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Elektromekhanika, 1959, Nr 6, pp 3 - 7 (USSR)

ABSTRACT: An analytical representation of a hysteresis loop may be of some practical importance. It appears that a magnetisation curve can be represented by an error function:

$$\Phi(x) = \frac{2}{\sqrt{2\pi}} \int_0^x e^{-t^2/2} dt \qquad (1) .$$

A hysteresis loop can be expressed parametrically by employing the error function. The result is stated in Eqs (2). By introducing a phase into this equation, the parametric expression for the loop is given by Eqs (3),

Card1/3

Representation of the Equation of a Hysteresis Loop by Means of an Integral with a Variable Upper Limit

where $\sin \varphi = H_1/H_m$, where H_1 is the coercive force. Explicitly, the $B(H)$ curve can now be written as:

$$B = \frac{2}{\sqrt{2\pi}} \int_0^{\frac{H}{H_m}\cos\varphi \mp \sin\varphi \sqrt{1-\left(\frac{H}{H_m}\right)^2}} e^{-(z^2/2)}\, dz \qquad (4) .$$

By adding a factor $k^2 = 1/\delta^2$, it is possible to vary the slope of the loop at $H = H_1$; the resulting equation of the loop is given by Eq (5) or, if B_m is the maximum induction, the formula is in the form of Eq (6). Further,

in order to control the quantity dB/dH at $H = 0$, an additional factor ν is introduced. The loop equation is therefore given by Eq (9). A further term γH may be added to this equation so that, finally, the hysteresis loop is expressed by Eq (10). The parameters k and ν in Eq (9) can be determined from Eqs (11) and (12). In some cases, even Eq (5) is adequate for the description of the loop. This is particularly true for ferrites, as can be seen from Figure 2, where the 'solid' curves denote the experimental characteristic while the circles correspond to the calculated points.

The author expresses his gratitude to V.M. Volkov and G.M. Makhonin for their help. There are 2 figures.

ASSOCIATION: Taganrogskiy radiotekhnicheskiy institut (Taganrog Radio-technical Institute)

SUBMITTED: September 4, 1958

TIKHOMIROV, G.N.

Plants as raw material for the production of natural shellac in Azerbaijan. Bot. zhur. 48 no.4:545-553 Ap '63. (MIRA 16:5)

1. Botanicheskiy institut imeni V.L.Komarova AN SSSR, Leningrad.
(Azerbaijan—Botany, Economic) (Azerbaijan—Lac insects)

SHARAPOV, N.I.; TIKHOMIROV, G.N.; SEREBRYAKOV, G.B.

Plant resources for the production of shellac in the U.S.S.R.
Rast. res. 1 no.1:66-73 '65. (MIRA 18:6)

1. Botanicheskiy institut im. V.L. Komarova AN SSSR, Leningrad.

SHARAPOV, N.I.; PROKOPENKO, A.I.; TIKHOMIROV, G.N.

Experimental production of white Chinese wax. Vest. AN SSSR 33 no.10:67-68 O '63. (MIRA 16:11)

1. Botanicheskiy institut im. V.L. Komarova i Zoologicheskiy institut AN SSSR.

SOV/144-59-12-2/21

AUTHORS: Klepfer, Ye.I., Assistant and Tikhomirov, G.M.

TITLE: Analytical Investigation of the Processes in a Ferrite Cell

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Elektromekhanika, 1959, Nr 12, pp 12-17 (USSR)

ABSTRACT: It is known that the magnetic induction can be represented by:

$$B = \mu_o H + 4\pi I \qquad (2)$$

where μ_o is the permeability of free space,

H is the magnetic field and

I is the intensity of magnetization.

By considering the modern theory of magnetism, it is shown that the magnetization can be expressed by Eq (9) where $\sin \varphi = H_c/H_m$, while k is so chosen that the distribution curve for the elementary magnets over a segment outside $-1 < \eta < 1$ is near to zero. In the case of ferromagnetic materials for the fields $H = (0 - 5) H_c$, the magnetic induction is expressed by:

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$$B = \mu_o H + \frac{2Bm}{\sqrt{2\pi}} \int_0 e^{-\frac{z^2}{2}} dz \qquad (10)$$

This represents the hysteresis loop of a given material. If the parameters B_m, H_m, H_c, μ_o and k are known it is possible to determine B for any given values of H lying within the interval $-H_m$ to $+H_m$. An example of an experimental curve and a calculated curve (evaluated by Eq 10) is shown in Fig 1. Eq (10) can be used to determine transient phenomena in a ferrite device. Such a circuit is shown in Fig 2. The operation of the device is described by Eq (11); this does not take into account the eddy currents since these can be neglected in the ferrite. The resulting differential equation for the system, derived from Eq (11) is in the form of Eq (13). In this $R = R_1R_2 / (R_2w_1^2 - R_1w_2^2)$. When $R2 = \infty$, the

Card 2/4 differential equation is in the form of Eq (14). This

Analytical Investigation of the Processes in a Ferrite Cell SOV/144-59-12-2/21

ASSOCIATIONS: Kafedra avtomatiki i telemekhanika Taganrogskogo radiotekhnicheskogo instituta (Chair of Automation and Telemechanics of the Taganrog Radio-Engineering Institute)
Kafedra vysshey matematiki Taganrogskogo radiotekhnicheskogo instituta (Chair of Higher Mathematics of the Taganrog Radio-Engineering Institute)

SUBMITTED: August 18, 1959

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TIKHOMIROV, Genrikh Mikhaylovich, starshiy prepodavatel'

Hysteresis loop equation represented in the form of an integral with a variable upper limit. Izv. vys. ucheb. zav.; elektromekh. 2 no.6: 3-7 '59. (MIRA 12:11)

1.Taganrogskiy radiotekhnicheskiy institut.
(Magnetic induction) (Hysteresis)

VERTSNER, V.N.; KIND, N.Ye.; MILYUKOV, Ye.M.; TIKHOMIROV, G.P.

Electron microscope investigation of the catalyzed crystallization of glasses of the system Li_2O-Al_2O_3-SiO_2. Dokl. AN SSSR 154 no. 3: 673-674 Ja '64. (MIRA 17:5)

1. Predstavleno akademikom A.A.Lebedevym.

OKSMAN, Ya.A.; TIKHOMIROV, G.P.

Cathode conductivity of antimony-sulfide films. Radiotekh. i elektron. 4 no.2:344-346 F '59. (MIRA 12:2)
(Electron optics) (Antimony sulfides)

SOV/109-59-4-2-26/27

AUTHORS: Oksman, Ya.A. and Tikhomirov, G.P.

TITLE: Cathode Conductivity of Antimony Sulphide Films (Katodoprovodimost' plenok sernistoy sur'my)

PERIODICAL: Radiotekhnika i Elektronika, 1959, Vol 4, Nr 2, pp 344-346 (USSR)

ABSTRACT: The effect of the increase of the conductivity of fine dielectric and semi-conductor films, when subjected to electron bombardment, is used in the amplification of the photo-emission currents (Ref 1). This effect is known as the cathode conductivity. The effect is characterized by the fact that it is possible to obtain very high current gain. The aim of this work was to determine the limiting gain which can be obtained with films of antimony sulphide at the ambient temperature. The measurement of the gain was done by employing a demountable model of a vidicon tube (See Fig 1). The tube was operated in the regime of fast electrons, so that the potential of the investigated film was positive with respect to the base material of the signal plate. The targets were prepared as follows: a thin

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Cathode Conductivity of Antimony Sulphide Films

organic film was stretched over a ring and this was coated by a transparent layer of aluminum ; a layer of antimony sulphide, having a thickness of 1-2 μ, was then deposited on the aluminum film. An electron-optical system was fitted above the target so that the target could be illuminated from the rear side by a diffuse beam of fast electrons. The accelerating voltage V could be varied from 0 to 25 kV. All the measurements were done at the ambient temperature. The experimental results are shown in Fig 2 and 3. Fig 1 shows the dependence of the induced current on the intensity of the exciting current for various values of the accelerating potential. Fig 3 illustrates the amplification of the target as a function of the accelerating potential. From Fig 3 it is seen that the maximum amplification is higher than 600. This is more than can be obtained with films of selenium, arsenic sulphide or aluminum oxide (see Ref 2 and 3). It was

Cathode Conductivity of Antimony Sulphide Films

also found that the inertia of the targets was of the order of 0.2 to 2 sec. There are 3 figures and 5 references of which 2 are Soviet and 3 English.

SUBMITTED: 27th February 1958

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L 04893-67 EWT(l)/EWT(m)/T/EWP(t)/ETI IJP(c) RDW/JD/GG

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AUTHOR: Biller,L.N.; Vertsner,V.N.; Davydov,M.S.; Kosnyrev,V.S.; Tikhomirov,G.P.

ORG: none

TITLE: Electron diffraction and electron microscope investigation of the initial stages of formation of lead sulfide and lead selenide films /Report, Fifth All-Union Conference on Electron Microscopy held in Sumy 6-8 July 1965/

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v. 30, no. 5, 1966, 799-802

TOPIC TAGS: electron microscope, electron diffraction, lead compound, sulfide, selenide, photoconducting film

ABSTRACT: The growth of thin films of lead sulfide and lead selenide deposited from solution onto glass or sapphire substrates has been investigated with an electron microscope, using the carbon-platinum replica technique, and by electron diffraction. The investigation was undertaken because of the technical importance of the materials for the production of photoconductive cells. The initial reagents were lead acetate, thiourea or selenourea, and sodium or potassium hydroxide. The size and distribution of crystals in the films were determined with the electron microscope, and the presence of impurities was detected by electron diffraction, using a transmission technique for the thinnest films and a reflection technique for the thicker ones. It was found that a necessary condition for the formation of a film that would adhere well to

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L 04495-67
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the substrate was the simultaneous deposition with the lead sulfide or selenide of some other poorly soluble lead compound (lead cyanamide, oxide, or subcarbonate). The lead selenide and sulfide crystals formed in the solution adhered poorly to the substrate, and the deposition of impurities inhibited the growth of these crystals and reduced the rate of increase of the thickness of the film. The formation of the impurity phases took place mainly in the early stages of the deposition when the solution was still rich in lead ions, for the impurities are considerably more soluble than the sulfide or selenide. It was sometimes difficult to detect the presence of an impurity phase in the lead sulfide or selenide films, particularly in the case of lead oxide which under some conditions was amorphous. The impurity could be detected, however, by treating the film with a solution capable either of dissolving the impurity or of converting it to lead sulfide (or selenide). Vacuum deposited films containing no impurities were unaffected by this treatment, whereas films deposited from solution were usually destroyed as a result of detachment from the substrate. Orig art has: 4 figures.

SUB CODE: 20/ SUBM DATE: 00/ ORIG REF: 001/ OTH REF: 002

Card 2/2 egk

ALEKSEYEV, A.G.; VERTSNER, V.N.; KONDRAT'YEV, Yu.N.; PODUSHKO, Ye.V.; TIKHOMIROV, G.P.

Catalyzed crystallization of glass. Dokl. AN SSSR 154 no.1: 178-180 Ja'64. (MIRA 17:2)

1. Predstavleno akademikom A.A. Lebedevym.